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ABSTRACT

The Cost and Funding Studies project of the proposed Western Interstate Bibliographic Network began activities in July 1975. The goals of the project were to: (1) determine representative costs of present library services in the West, (2) estimate future costs of library services in the West with proposed network support, (3) evaluate and compare the impact of a network on costs of library services, and (4) examine equitable programs of financial support for the proposed network. The second quarter of the project was devoted to project planning, design, and development of data collection intervention strategies. Major achievements during the quarter included completion of a pretest in Idaho and establishment of sampling procedures. Progress was made in designing the data collection instrument for the survey of costs in technical processing and interlibrary loan. The appendices which form the bulk of this report, include a revised schedule for the project, flowcharts of general processing, and a financial report. (Author/KP)

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SECOND QUARTERLY REPORT

Project No. 475AH50102

Grant No. G 00 7500741

COST AND FUNDING STUDIES OF THE PROPOSED WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

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USOE QUARTERLY REPORT

For the Period

October 1, 1975 to December 31, 1975

TABLE OF CONTENTS

		Page
I.	Introduction	1
II.	Project Management and Staffing	2
III.	Project Activities and Major Findings	2
	A. Project Planning and Scheduling	2
	B. Planning Data	3
	C. Sample Design and Selection	3
	D. Data Collection Methodology	7
	E. Data Collection Instruments	8
	F. Analyses Plans	10
	G. Data Processing	11
	H. Idaho Pretest	12
	I. Bibliographic Center Studies	14
	J. Cost-Impact Analysis	15
	K. Related Activities	16
IV.	Plans for Next Quarter	17
VI.	Appendix Table of Contents	18

I. INTRODUCTION

Currently the Western Interstate Commission for Higher Education (WICHE), under Grant No. G 00 7500741 from the U.S. Office of Education, is conducting cost and funding studies concerning the development and implementation of a proposed Western Interstate Bibliographic Network. The grant was officially awarded July 1, 1975, and will be approximately one year in duration. This is the second quarterly report of the project and includes activities from October 20, 1975 to December 31, 1975. Activities from October 1 to October 20, 1975 were covered in the first quarterly report.

The specified goals of these studies are:

A. To determine representative costs of library services without network support: A survey of costs in technical processing and interlibrary loan in a sample of 100 western libraries, and in-depth examination of these costs in 12 case studies (the 12 case studies will be chosen from the 100).

B. To estimate future costs of library service at various levels of proposed network support: The investigation of the costs of proposed network services, and combinations thereof, including system costs, communications and network administrative requirements.

C. To evaluate and compare the impact of a network upon costs of library services: By examining present library costs and the cost of network services, along with impacted activities within technical processing and interlibrary loan, to derive a model for determination of the changes in cost brought about by network support.

D, To examine and recommend equitable programs of financial support for an interstate bibliographic network in the West: The evaluation of existing network structures, potential network membership, financial requirements and network benefits to derive a set of optimal funding strategies upon which viable and equitable decisions can be made.

These studies are concurrent with the network design and development study funded by the Council on Library Resources (CLR) and conducted by WICHE. Much of the network endeavor is common to both studies. For this reason, it is recommended that the reader refer to the quarterly reports of the CLR project for supplemental information.

Beyond the specific purpose these studies serve in the development of the Western Network, these studies promise to be of substantial value to future research in library services.

II. PROJECT MANAGEMENT AND STAFFING

Eleanor Montague officially joined the WICHE staff as project director on December 8, 1975. As project director, she is responsible for planning, administration and review of the network project activities. She is directing both the CLR and USOE projects. During the second quarter, the program director, Maryann Duggan, devoted 10% of her time to these studies. The majority of this time was utilized in project review, policy and management. Maryann Kevin Brown, the cost and funding analyst, has devoted 100% of her time to this project. The bulk of this time was spent on data collection design, analysis plans, scheduling and the pretest conducted in six Idaho libraries. Anita McHugh, the research assistant for the cost and funding studies, devoted 0.5 FTE to analysis plans, programming, compiling universe lists for the sample, and analysis of Idaho pretest data. Secretarial support was provided by Sue Middleton and Anne Peckham of the Core program of the WICHE Continuing Education and Library Resources Program and Louise Martin of the CLR Western Network Project. (Since Eleanor Montague joined the project so late in the quarter and the bulk of her early work was on the Council on Library Resources grant, no salary charge was made against the USOE grant during this quarter.)

III. PROJECT ACTIVITIES AND MAJOR FINDINGS

A. Project Planning and Scheduling

Throughout the second quarter, careful examination was given to the schedule of project activities in order to establish priorities and milestones in the project. Of special consideration was the interaction between the Western Library Network Project and the Cost and Funding Studies. Certain adjustments were necessary in project scheduling in order to adequately meet the needs of the developing network. An examination of the funding issues and existing network funding strategies has been given immediate priority in the project schedule. The preliminary funding inquiry will begin in late February. In order to accommodate this change of venue, the originally scheduled study of the three bibliographic centers - The Bibliographic Center for Research, Rocky Mountain Region (Denver), The California State Library Union Catalog (Sacramento) and The Pacific Northwest Bibliographic Center (Seattle) - has been rescheduled. Investigation of the bibliographic centers will be postponed until March and April. Further changes in the schedule have also occurred due to delays in questionnaire revision, examination of alternatives to the original sample design and the compilation of accurate universe listings for the sample. These unforeseen difficulties have altered the initially projected date for fielding the cost data collection instruments. These changes are reflected in Appendix A, an overview of the proposed schedule under which the project staff is presently working.

Milestones in the project are considered to be:

- Issuance of the survey instrument to 100 libraries (March 1)
- Site visits of the 12 libraries selected for case study (March)
- Working Paper on funding (March 31)
- Bibliographic Center studies (March-April)
- Analysis of cost study and case study data (April 30)

DEFINITION OF ACRONYMS

The acronyms used in this report have the following meanings:

ABAG - Association of Bay Area Governments, Berkeley, California.

ARL - Association of Research Libraries.

BALLOTS - Bibliographic Automation of Large Library Operations using a Time-Sharing System. This system, initially developed at Stanford University began daily on-line operation in November, 1972.

C&F
C&F Studies - Cost and Funding Studies of the proposed Western Interstate Bibliographic Network funded by the U.S. Office of Education.

CLR - The Council on Library Resources, presently funding the network design study.

CU - University of Colorado, Boulder, Colorado.

FTE - Full-time equivalence, normally interpreted to mean the dedication of 40 hours a week for 52 weeks of a staff person's time.

NCHEMS - National Center for Higher Education Management Systems at WICHE The mission of NCHEMS is to develop compatible management information systems for postsecondary education and to promote their use in institutions and agencies through the U.S. The ultimately successful NCHEMS effort will provide improved information to postsecondary education administration at all levels, facilitate exchange of comparable data among institutions, and expedite reporting of comparable information at the state and national levels.

OCLC - Ohio College Library Center, a non-profit corporation chartered in the state of Ohio to provide computer cataloging support for member libraries through on-line tie-in with remote terminals tied into the central computer system in Columbus, Ohio.

PLAN - Public Library Automation Network. An experimental network, sponsored by the California State Library, of seven California public libraries using BALLOTS.

UAL - United Airlines.

USOE - The United States Office of Education

WICHE - Western Interstate Commission for Higher Education, presently conducting the Cost and Funding Studies.

WLN - The Washington Library Network.

- Impact analysis (June 15)
- Final composition of funding alternatives (July 31)

Each of these milestones represents completion of a major phase within the cost and funding studies and acts as an intermediate performance measure within the project.

B. Planning Data

Each of the 17 western states and British Columbia are being asked to supply the network projects with the following information:

- an inventory of libraries (public, academic and special), centralized processing centers, union catalogs, automated systems and book catalogs;
- data on interlibrary loan, circulation and holdings;
- maps of regions, federations and library systems, as well as data communication terminal locations; and
- descriptive information on networks, consortia, or developing automated systems.

The questionnaire, which appeared in the first quarterly report for this project, was originally issued at the WICHE Western Council Meeting, Sun Valley Lodge, Idaho, held August 14-16, 1975. To date, the questionnaire has been completed by the State Libraries of Alaska, Arizona, California, Idaho, Nevada, Oregon, South Dakota, Utah and Washington. Partial data have been returned by New Mexico, Montana and Colorado. The states of Wyoming, North Dakota, Kansas and Nebraska have agreed to submit planning data.

C. Sample Design and Selection

The sample design for library cost data collection and possible alternatives to the sample design were the subjects of intensive evaluation during the second quarter. The original sample design required the selection of 100 libraries, and of those 100 libraries, the selection of 12 libraries for case study, according to the following:

	SAMPLE SIZE	CASE STUDIES
ACADEMIC LIBRARIES		
Large	17	2
Other	28	3
PUBLIC LIBRARIES		
Large	10	2
Other Regional Libraries	18	2
Other	10	?
STATE LIBRARIES	17	2
	100	12

The resulting analysis of collected data would yield cost estimates for the western area as a whole. However, due to the diversity of the western states, special consideration was afforded other sampling strategies which might yield estimates for sub-regions of the West, or estimates on a state-by-state basis. The possibility of using the three bibliographic centers service areas -- the Bibliographic Center for Research, Rocky Mountain Region (Denver), the California State Library Union Catalog (Sacramento), and the Pacific Northwest Bibliographic Center (Seattle) -- as boundaries for three regional divisions was discussed. This yielded the following groupings:

REGION I -- CALIFORNIA STATE LIBRARY UNION CATALOG

California
Hawaii

REGION II -- PACIFIC NORTHWEST BIBLIOGRAPHIC CENTER

Alaska
British Columbia
Idaho
Montana
Oregon
Washington

REGION III -- BIBLIOGRAPHIC CENTER FOR RESEARCH, ROCKY MOUNTAIN REGION

Arizona
Colorado
Kansas
Nebraska
Nevada
New Mexico
North Dakota
South Dakota
Utah
Wyoming

These regional distinctions are an arbitrary geographical division presenting the same problems as those of the original sample design. The possibility of a state-by-state sample was also explored. Such a sampling approach would have provided each state with planning and costing data sufficient for decision-making concerning a network. The design for such a sample was constructed by Mr. Vernon E. Palmour. The sample required selection of twenty libraries (forty libraries in California) in each western state and British Columbia. Though this sample has many merits, the increased staff requirements, analysis, printing and programming necessary to handle a sample of 380 libraries proved not to be feasible within the constraints of the current project. Other strategies were also forwarded for potential use. However, after much study, it was concluded that the original design with some minor revision would be of greatest value.

The inclusion of special libraries in the sample was also considered. Indeed, the special library sector represents a valuable resource in the western states and must be considered in network planning. However, due to the varying purposes, processes and services of the special library, unique examination would be required. This is beyond the scope of this project.

School libraries were also considered as potential candidates for the survey. Many difficulties exist in such an examination due to the size of the universe and diversity of library operations. Thus, investigation would require the expansion of the sample and study approach beyond the limits of this study.

Adjustments were made to the sample, however. In order to assure the consistency between the public library strata and the academic strata, the large academic stratum was changed from the designation of members of the Association of Research Libraries (ARL) to all academic libraries holding over 900,000 volumes. This stratum, then, contains the largest 20 academic libraries in the West, corresponding to the large public library stratum which includes the ten largest public libraries in the West. This change has altered the rest of the sample cells somewhat. The 17 state libraries in the West will be included in the sample with certainty (i.e. with a probability of one) as originally proposed. The remainder (83 libraries) would be split nearly equally between academic and public libraries. Such a division would yield 41 libraries in the academic library strata and 42 libraries in the combined strata of public libraries. In the academic sector, then, the "other academic library" cell size is 21. For public libraries, 32 libraries are to be divided between other regional libraries and other public libraries. Due to the large universe size for other public libraries, it was concluded that this sample cell should be expanded to 22, reducing the other regional library sample size to ten libraries. The following sample allocations are then apparent:

TYPE OF LIBRARY	SAMPLE SIZE
ACADEMIC LIBRARIES	
Large	20
Other	21
PUBLIC LIBRARIES	
Large	10
Other Regional Libraries	10
Other	22
STATE LIBRARIES	17

Because of the great many libraries that fall into the "Other" category under public libraries (an estimated 1666 such libraries), from which only 22 libraries would be selected in the sample, it was concluded that a lower limit should be established for inclusion in the sample. This would increase the confidence interval of cost data collected within this stratum. Since the simplest rule for such a limit is in volume holdings, this measure is to be used. In establishing such a limit, the criterion used was that in no single state should such a limit exclude more than 50% of the public libraries. Using this method, a lower limit was set at 3000 volume holdings. By excluding all those libraries with less than 3000 volumes, the universe size for the "Other Public Library" stratum is reduced to 1483 libraries. An estimated number of libraries excluded from the universe by state due to this standard is listed in Appendix B.

Preliminary selection of the large strata in public and academic libraries has already been performed. These libraries will be asked to participate in the survey of costs in technical processing and interlibrary loan. Contingent upon their consent to participate, these libraries will be chosen for inclusion in the study. Data in making these selections were provided by the Library Surveys Branch, National Center for Educational Statistics, U.S. Office of Education. In addition, these statistics were verified through the American Library Directory, 1974-75 and the state planning data submitted for this project. Additional data in support of selections for the "Academic Large Libraries" was obtained from the Association of Research Libraries, ARL Statistics, 1974-75, wherever possible. In instances of discrepancy between statistics which might affect selection, the libraries in question were queried directly.

Listings for the "Other Academic Libraries" are being formulated from the National Center for Education Statistics, Higher Education Directory, 1974-75. Criteria for listing in this directory are cited in Appendix C. Certain exclusions from this list have been made for the purposes of this survey:

- Highly specialized, technical, professional or trade schools;
- Seminaries; and
- Institutions offering only graduate level education.

Listings for "Other Regional Libraries" within the public library strata have been provided by planning data submitted by each state and verified by the American Library Directory. Where planning data were unavailable, the state library was contacted for verification. Discrepancies in any other data were also clarified through state library agencies. The difficulty in discerning regional libraries within each of the western states and British Columbia is that each state defines a regional library somewhat differently. In order to overcome this discrepancy, the following definition of a regional library will be employed for use in sampling:

> Regional Libraries: A public library serving a group of communities in two or more counties, or a group of independent libraries in two or more counties.

Ten libraries from this group will be asked to participate in the survey of costs in technical processing and interlibrary loan.

A list of "Other Public Libraries" is being drawn from a combination of the American Library Directory and published state statistics. Discrepancies between these lists are being clarified with the state library agency or with the libraries directly. This stage of listing is the most difficult. The magnitude of the universe, and the obstacles in compiling an inclusive and accurate listing demands a great deal of care and time for accurate sampling.

After the sample of 100 libraries has been drawn, the twelve case studies will be selected. Nomination of these case studies will be made by the network staff in accordance with the following criteria:

- geographical distribution,
- level of automation, extent of manual operation, and
- willingness to participate.

It is anticipated that letters of invitation will be issued by February 20. Since it is expected that approximately 25-30% of those libraries asked to participate in the study will be unable to do so, sample selection within each stratum will include a 30% "over-sample" to provide alternative candidates. In the event that more than 30% of the sample decline participation, additional sampling will be performed in accordance with the original random selection. This measure will avoid possible detriment to the integrity of the sample.

D. Data Collection Methodology

The focal point of data collection is the cost of those items or activities most liable to change due to network support. This examination is further limited to costs within technical processing and interlibrary loan. Specifically, these costs include:

- Direct labor, including salaries, fringe benefits and fulltime equivalencies.
- Administrative and supervisory labor, including library administrative staff involved in planning, budgeting, personnel, etc. and staff involved in the supervision and direction of technical services and interlibrary loan.
- Equipment purchase and rental, encompassing that equipment used to support the normal operations of the technical processing and interlibrary loan.
- Supplies, including that stock of items (other than equipment) used to maintain normal operations, support routines, etc.
- Communications, including all forms of telecommunication, message transmission, interaction between libraries, between library and individual, between library and publisher, etc.
- Support services, including out-of-library sources which support technical processing or interlibrary loan in such a manner as to produce greater efficiency, cost-effectiveness, increased throughput, etc. or in-library sources of support other than staff, such as in-house computer.

These general costs will be collected through a survey of 100 libraries, representing both public and academic libraries (see Section III-C for sampling methodology). Form #2, described below, is the instrument to be employed in gathering these data.

Further refinement of these gross cost categories is to be achieved through twelve case studies selected from the wider sample of 100. Detail on costs will include:

- building investment, rental and maintenance,
- equipment investment and depreciation,
- strict delineation of administrative overhead, and
- precise fringe benefit packages.

Form #3, also outlined below and which incorporates all data from Form #2, will be the instrument used to collect these data from the twelve libraries selected for case study (see Section III-C for a description of criteria used in selection of the twelve case studies).

Additional data to be collected from the sample of 100 libraries include transaction information on interlibrary loans (both lending and borrowing). The purpose of this data collection is to derive estimates of interlibrary loan traffic in the West and discern patterns in this traffic. Presently a three-week interval is proposed for this data collection. During this interim a sample of interlibrary loan transactions will be monitored. The sample will not exceed 250 transactions in any single library, and will be selected at regular intervals (1 out of 5, or 1 out of 10 depending on volume of transactions).

Within the twelve case studies, specific activities within technical processing and interlibrary loan will be costed. The following will be derived:

- unit cost per activity,
- staff level allocations to each activity, and
- impact of network services on these costs and allocations.

By combining the unit costs per activity into logical functional categories, such as original cataloging, interlibrary loan borrowing, etc., functional costs can be determined. Furthermore, by designating those activities which will alter, disappear or be reduced by network services, a cost impact prediction can be made. This data collection will be effected through activity monitoring by staff involved in technical processing and interlibrary loan. Each staff member will be asked to maintain an activity sheet (described below) indicating time and volume throughput for specified activities. Presently, it is proposed that these sheets be kept over a three-week interval.

E. Data Collection Instruments

Of foremost importance during the second quarter was the design and revision of the data collection instruments to be used in the cost survey of 100 libraries and the twelve case studies. These instruments consist of:

For the cost survey of 100 libraries:

The survey of costs in technical processing and interlibrary loan (Form #2): A twelve-page questionnaire asking for general cost information and processing patterns in acquisitions, cataloging and interlibrary loan.

Interlibrary loan abbreviated borrowing transaction form (Form #8A): A single-page tracking document to monitor lag time, type of request, queried institution and disposition of the request for a sample of transactions received by patrons for materials owned by another library.

Interlibrary loan abbreviated lending transaction form (Form #9A): A one-page tracking document to monitor lag time, type of request, requesting institution and disposition of request for a sample of transactions received from another library for material believed to be owned by the survey library.

For the twelve case studies:

In-depth cost questionnaire for technical processing and interlibrary loan (Form #3): A detailed questionnaire including the same questions appearing in Form #2, above, and also additional costing elements, such as facilities, equipment purchase, fringe benefit packages.

Acquisitions Activity Sheet (Form #4): A log sheet to be maintained by each staff member on a daily basis, which monitors the time spent on 29 specified activities and the volume throughput for each activity.

Cataloging Activity Sheet (Form #5): A log sheet to be maintained by each staff member involved in cataloging activities on a daily basis. Fifteen specific activities and the volume throughput for each are monitored.

Serials Activity Sheet (Form #6): A log sheet to be maintained by each staff member involved in the processing of serials. Twelve specific activities and the volume throughput for each are monitored.

Interlibrary Loan Activity Sheet (Form #7): A log sheet to be maintained by each staff member involved in interlibrary loan routines. Twenty-five activities have been specified for tracking of time and volume throughput.

Interlibrary loan borrowing transaction form (Form #8): An expansion of Form #8A, above, requiring staff time spent on assistance to the patron, bibliographic verification, and locating a lending agency.

Interlibrary loan lending transaction form (Form #9): An expansion of Form #9A, above, requiring staff time spent on bibliographic verification and locating the requested material.

Mr. Vernon E. Palmour of the Public Research Institute, and Dr. Lucille Wert of the University of Illinois, both consulting for this project, reviewed these instruments during the month of November. Several of their suggestions were incorporated into these forms. Additionally, Dr. Barbara Slanker of the American Library Association was instrumental in the redesign of the two background forms (Forms #2 and 3). Due to the complexities involved in the processes of interlibrary loan, Ms. Virginia Boucher of the University of Colorado Library volunteered her time to assist in the revision of those instruments pertaining to interlibrary loan. Further assistance with the data collection instruments was provided by Mr. John Wolthausen of the Association of Bay Area Governments (ABAG), Berkeley, California. Presently ABAG is conducting a survey of California Bay Area library automation. The instrument designed for this survey has proved to be a useful model for several of the sections in the background instruments being used for these studies. Mr. Paul Janaske of the U.S. Office of Education also made some suggestions for revision of the forms in order to meet the standards established by the U.S. Office of Education. Of major impetus to the instrument redesign was the pretest conducted in Idaho (see Section III-H).

F. Analyses Plans

Segregation of costs into logical and useful categories for analysis purposes is a preliminary step in data manipulation. The first approach which can be taken is to divide costs into direct and indirect costs. Specifically, these are:

> Direct costs: Costs which can be directly traced to a specific activity or function are considered to be "direct costs." Such costs include labor associated with this activity, support services directly supplementing this activity or function, materials and supplies used in this activity, and rental charges for equipment rented for use in this activity or function.
>
> Indirect costs: Overhead costs which cannot be considered traceable to any single activity or function are considered "indirect costs." These costs are often incurred either jointly by several activity groups or by several departments. Because these costs cannot be readily traced to a specific task, an average overhead rate, or burden rate, is employed. These costs include equipment investment and depreciation, facility overhead, administrative and supervisory labor costs, repair costs, etc.

Such an approach to costing is, of course, useful. However, the objectives of this analysis must also be incorporated into analysis plans. Primarily, analyses must be amenable to network services impact analyses to be performed during later phases of these studies. Then, a more adequate approach to the segregation of cost data would be to categorize costs according to potential impact of a network. A simplistic view of these cost classifications might be the following:

- Costs that will definitely be impacted by network services (definitely impacted costs);
- Costs that are contingent upon those costs changed by a network (related impacted costs);
- Costs that will possibly change due to network services (possible impacted costs); and
- Costs that will remain unaffected by network services (unaffected costs).

In examining the data that fall into these classifications, the following outlines possible assignments of cost elements:

- Definitely impacted costs: Staff costs associated with replaced activities, supplies used in the support of replaced activities (e.g., catalog cards), rental cost for equipment used in direct support of replaced activity (e.g., copying equipment), communications supplanted by network services (e.g., links to automated services), support service costs which will be supplanted by network services (e.g., card services).

- Related impact costs: Supply and equipment costs directly related to staff size (e.g., furniture, general supplies), overhead rates that change with staff size (e.g., administrative and supervisory costs), other variable costs contingent on staff size.
- Possible impacted costs: Staff costs associated with level of staffing which may alter due to an internal decision related to network intervention, administrative and supervisory costs which may alter due to an internal decision related to staff impact by the network, optional discontinuance of support services due to network support (e.g., proof slip subscriptions, etc.).
- Unaffected costs: Building overhead, materials budget, etc. that may not be directly affected by a network. These constant costs are more related to library size and type than operations or staffing.

By thus segregating cost data into these classes, we can approach the determination of the impact of a network on library costs in technical services and interlibrary loan more efficiently.

Also a part of the analyses plans is the specification of correlations to be made from the data received. Among the most basic correlations necessary are:

- Effect of support services upon costs,
- Effect of support services upon staffing levels,
- Total cost for materials and processing,
- Interlibrary loan patterns of borrowing and lending,
- Effect of support services upon processing lags,
- Average unit processing costs, and
- Effect of support services upon average unit processing costs.

A selected list of potential correlations appears in Appendix D. This document is under staff review for analyses planning.

G. Data Processing

During the second quarter, the various computer facilities available to this project were evaluated. Due to the magnitude of data to be processed for these studies, cost and time factors were of major consideration in this evaluation. Consequently, it has been decided to utilize the United Airlines (UAL) twin IBM S/360 Model 195's, located at the UAL Denver Technical Center. This is an on-line reservation system for which computer time is sold on the back-up machine at competitive prices. Under the auspices of the National Center for Higher Education Management Statistics (NCHEMS) of the Western Interstate Commission for Higher Education, an RJE facility, including CRT, printer and card reader, is located in the WICHE building. Due to the ease of access and reasonable pricing schedules offered for use of this computer, the UAL system was selected over the Control Data CD6400 owned by the University of Colorado. The CD 6400 will be used if supplementary computer time is necessary. Included in the UAL system is OSIRIS III, an integrated collection of computer programs for management and analysis of social science data. These programs will be used as much as is feasible to avoid the need for original programming. Since the

use of OSIRIS III requires intermediate results, and due to the volume of raw data expected, data will be stored on a 3330 disk for the duration of the data processing. After the analysis of these data is complete, the data will be copied onto a 1600 BPI tape for ready access and reference in the future.

The University of Colorado (CU), Boulder, will provide keypunch services through its computing center. The data collection instruments have been carefully scrutinized by the keypunch staff at CU. By incorporating their suggestions, keypunching can be done directly from the forms avoiding the time-consuming task of transcribing the data.

The majority of original programming to be performed for data analysis will be done by Ms. Anita McHugh, the research assistant for this project. Supplemental programming will be provided by the University of Colorado Computing Center as necessary. A preliminary flow chart of the processing and storage allocation of data from the survey of technical processing and interlibrary loan costs in 100 libraries appears in Appendix E. Partial shells for the output of primary reports have been formulated for staff review; final versions will appear in future quarterly reports.

H. Idaho Pretest

In order to evaluate the data collection instruments and the analyses plans, a pretest for the survey and case studies was conducted during December, 1975. Six Idaho libraries consented to participate in this trial. They are:

- Idaho State Library
- Boise Public Library
- Boise State University
- Ricks College
- Idaho Falls Public Library
- Nampa Public Library

All six Idaho libraries were asked to complete the background questionnaire, Form #2, Survey of Costs in Technical Processing and Interlibrary Loan. Additionally, each library was to monitor a sample of interlibrary loan transactions, both borrowing and lending, during the week December 8-14. Every fifth borrowing transaction and every fifth lending transaction beginning with the fifth such transaction was tracked. Data kept on these transactions included:

- Date request was received,
- Date of disposition,
- Type of disposition (filled, unfilled, forwarded to another library), and
- Type of publication (document, technical report, etc., language, subject).

The three libraries located in Boise, Idaho -- Idaho State Library, Boise Public Library, Boise State University -- were also asked to monitor the staff time spent on these transactions for bibliographic checking, verification and assistance to the patron.

Idaho State Library, Boise Public Library and Boise State University were selected for case study. This required (beyond the data collection already mentioned), the completion of the in-depth costing questionnaire for technical processing and interlibrary loan, Form #3 (a description appeared in Section III-E). Data from this form included:

- organizational structure,
- procedures for technical processing and interlibrary loan,
- facility overhead,
- equipment overhead,
- salary information, and
- fringe benefit packages.

These additional background data were necessary to assess actual costs for activities monitored in acquisitions, cataloging, serials and interlibrary loan. During the week of data collection (December 8-14), technical processing and interlibrary loan staff members of the three case study subjects were asked to enter the time and unit volume processed for a variety of activities. The instruments employed for this data collection (described in Section III-E) were:

- Acquisitions Activity Sheet, Form #4
- Cataloging Activity Sheet, Form #5
- Serials Activity Sheet, Form #6
- Interlibrary Loan Activity Sheet, Form #7

After completion of the two background forms (Forms #2 and 3), a meeting of representatives from each of the six Idaho libraries and the WICHE Library Program Director and the Cost and Funding Investigator was held on December 3. The purpose of this meeting was to evaluate these background forms, as well as to examine data collection techniques to be employed during the week of December 8. A review of the difficulties encountered in completing the forms, and discrepancies and duplications within the forms, served as a guideline in revising these background instruments. Among the major revisions occuring from this pretest are:

- the combination of the two background forms in the case studies,
- incorporation of procedures with the forms themselves,
- reordering of the questionnaires,
- rewording of some obscure questions, and
- omission of questions which are difficult or time-consuming to answer.

Completed background forms were also reviewed by the cost and funding staff to locate discrepancies in reporting which were caused by the format of the instruments or the wording of questions. An attempt has been made to correct these inadequacies in the forms.

On December 4, a training session was held for technical processing and interlibrary loan staff members of the three libraries selected for case study (i.e., Idaho State Library, Boise Public Library and Boise State University). The purpose of this session was to familiarize staff with data collection procedures to be followed during the week of December 8. Fewer difficulties

thus arose in data collection during that week, and it would appear to be beneficial to repeat this technique in the twelve case studies. Changes in the activity and transaction forms have occurred due to this pretest. These adjustments include an expansion of tasks, and the combination of procedures and definitions with the data collection instruments themselves.

Analysis of the Idaho pretest data is presently underway. In order to simulate field analysis, each library was assigned to a stratum used in the official sample design. In this manner, the following assignments were made:

ACADEMIC

Large:	Boise State University
Other:	Ricks College

PUBLIC

Large:	Boise Public Library
Other Regional:	Idaho Falls Public Library
Other:	Nampa Public Library

STATE: Idaho State Library

Follow-up letters were sent to clarify conflicting information or incomplete responses. This method of follow-up proved to be sufficient and will probably be used in the actual fielding of the instrument. At present, the following elements partially represent the interim results being manipulated from the pretest survey instrument, Form #2, Survey of Costs in Technical Processing and Interlibrary Loan:

- growth of collection by type of material,
- operating cost per volume held,
- salary cost per volume held,
- operating cost per volume added,
- salary cost per volume added,
- volume to title ratios,
- departmental operating cost per volume throughput,
- interlibrary loan borrowing and lending patterns, and
- support services and costs.

These compilations will form the first stage of analyses preparatory to costing services and determining factors which alter costs in technical services and interlibrary loan.

Results of the Idaho pretest will represent the final establishment and refinement of the analysis plan to be used in the survey of 100 libraries and the twelve case studies.

I. Bibliographic Center Studies

Various approaches to the examination of the three bibliographic centers in the West -- The Bibliographical Center for Research, Rocky Mountain Region (Denver), The California State Library Union Catalog (Sacramento) and The Pacific Northwest Bibliographic Center (Seattle) -- have been considered. These proposed

examinations range from an in-depth data collection and analysis (such as that in the case studies outlined earlier) to an evaluation of cost data already available within these centers. The difficulty in establishing an investigatory approach is the determination of the impact of a network on these bibliographic centers. This is, of course, prerequisite to isolating activities and costs to be studied. The intricate role which the bibliographic centers will necessarily play in a developing network in the West must first be delineated. As an interim measure, until such specifications can be derived, preliminary meetings have been held with both Sheila Thornton of the California State Library and Donald Simpson of the Bibliographical Center for Research. The purpose of these meetings was to examine possible data collection approaches and determine data already available within these centers. Of particular interest were information on interlibrary loan traffic, manual operations surrounding the union catalogs of each center, relevant service costs and the expansion of services. It is expected that examination of the bibliographic centers will focus upon interlibrary loan costs and patterns and costs surrounding the maintenance of the union catalogs. Additionally, other services will be selected for examination.

The California State Library has recently completed an internal study of interlibrary loan costs. The thoroughness and quality of this study provides sufficient information on the costs incurred at the state library for interlibrary loans, thereby alleviating the necessity for such a cost data collection of interlibrary loan by the cost and funding staff. The concentration, then, at the California State Library will be upon the manual operations surrounding the union catalog and the interlibrary loan patterns exhibited there. Background data from the California State Library Union Catalog have been examined and are presently being analyzed.

The Bibliographical Center for Research is presently expanding services to members. This growth makes cost determination somewhat more difficult, due to fluctuating costs. Diversification lowers the overhead, or burden, rate and changes staff requirements. Such investigation while costs are shifting increases the complexity of isolating cost elements. Presently, background data submitted by the Bibliographic Center for Research, along with monthly statistics provided to the project by the center, are being monitored to determine patterns and possible costing components which might be isolated in the examination of the Bibliographical Center for Research.

After a similar review of the data available at the Pacific Northwest Bibliographic Center, scheduled for early March, a final decision on the optimal approach to cost studies at the bibliographic centers can be made.

J. Cost-Impact Analysis

Much examination has been given to the possibility of collecting other types of data beyond that of the survey for purposes of cost-impact analysis. One very basic problem arises from complete dependence upon the library cost survey data which must be considered. These data represent what might be considered for our purposes, base data. That is, data which is collected prior to any network service intervention. Though estimates can be derived as to effect of a network on these costs, the uncertainty attached to this prediction is obvious. To counteract this serious inadequacy, study has been given to

both base data and data subsequent to possible network service intervention. Such collection is possible in instances where libraries in the West are considering joining BALLOTS, the Washington Library Network (WLN), the Ohio College Library Center (OCLC), or any other possible network services. To this end, the possibility of examination of the Nevada State Library Cooperative Services Division which is considering a tie-in to BALLOTS, along with the Billings Public Library which is contemplating a tie-in to WLN, has been suggested. Similarly, a candidate for data collection would be chosen from libraries joining OCLC.

In exploring this measure, the cost and funding analyst met with the director of the Nevada State Library Cooperative Division (Ms. Rae Cleminson), the Nevada State Librarian (Mr. Joseph Anderson) and Mr. David Anderl of the University of Nevada at Reno. Background data supplied by the Nevada State Library Cooperative Division is presently being summarized. The possibility of additional data collection is still under deliberation.

A decision as to the extent of data collection necessary beyond the survey of costs in technical services and interlibrary loan is pending. The major concern in extending the examination of costs to include impact data is the additional staff time and analysis required for such an investigation.

K. Related Activities.

On November 12-13, 1975, the U.S. Office of Education project officer, Mr. Paul Janaske, visited the WICHE offices to review the cost and funding studies and offer the assistance of the U.S. Office of Education towards the successful completion of the project. He was able to establish guidelines for the questionnaires and assist in the resolution of many of the issues then facing the project. An agenda of this site visit appears in Appendix F.

In conjunction with a trip to the California State Library Union Catalog, the cost and funding analyst visited the Sutter County Free Library in Yuba City, California. Under the direction of Ms. Sara Swinney, the Sutter County Free Library (a small public library located in Northern California) is one of seven public libraries participating in the Public Library Automation Network (PLAN) which is a pilot project providing BALLOTS services. The purpose of this visit was to identify potential use of BALLOTS and determine the possible impact of such service on the public library sector.

Because of the increasing interest in the network projects, their direction and accomplishments, a Western Network Newsletter was initiated. The first issue was released in January, and successive issues will appear at irregular intervals. The first issue of the Western Network Newsletter appears in Appendix G.

On February 2, the CLR network project will hold its first Steering Committee meeting. The purpose of the Steering Committee meeting is to establish the direction and priorities of the Western Network, as well as to examine possible organizational, governance and funding structures for such a network. In order to provide the Steering Committee with information concerning the cost and funding studies, a summary of the project was prepared and appears in Appendix H.

IV. PLANS FOR NEXT QUARTER

As outlined in Appendix A, the revised overview of the project schedule, the next quarter will be devoted to data collection in 100 libraries, site visits in twelve libraries selected for case study, preliminary investigation of funding strategies for a Western Library Network, and analysis of the Idaho pretest data.

The data collection instruments for the survey of costs of technical processing and interlibrary loan are scheduled for final approval in the latter part of February. At this time, letters of invitation to libraries selected in the sample will be issued. Response is expected shortly after this, at which time the questionnaire will be issued to consenting libraries. Site visits of the twelve case studies, to be conducted by the cost and funding analyst, will be performed during the month of March. Also during this time, incoming data will be entered into the data base, and preliminary analysis will begin. Most of the libraries involved in case studies will begin a three-week data collection interval to collect time and unit volume data on technical processing and interlibrary loan throughput.

In order to provide adequate and timely information for network planning, the issue of funding and funding strategies has been given a high priority for examination during the next quarter. A preliminary working paper reviewing funding alternatives will be drafted during the month of February. This approach should yield a sufficient base for preliminary decisions in funding strategies.

Of fundamental importance during the third quarter is the analysis of Idaho pretest data. This analysis will establish the analysis approach to be employed in the survey of 100 libraries and the case studies. Results of this analysis are to be completed during the latter half of February.

Additionally, after assessment of the bibliographic centers' role in the developing Western Library Network, intervention strategies for cost studies will be formulated. This will include the development of data collection instruments, if necessary, and a thorough review of existing data on the centers. Continued work will be performed on possible network-impact models, and other designs for future cost estimates.

APPENDIX TABLE OF CONTENTS

Appendix A: Overview of Revised Schedule for the Cost and Funding Studies of A Western Interstate Bibliographic Network

Appendix B: Effect on Public Library Universe by the Exclusion of Libraries With Less Than 3,000 Volume Holdings

Appendix C: Criteria for Listing in the Higher Education - Education Directory, 1974-75

Appendix D: Selected Potential Correlations to be Performed on Survey of Costs in Technical Services and Interlibrary Loan

Appendix E: Flowchart and Storage Allocation for Survey of Costs in Technical Processing and Interlibrary Loan

Appendix F: U.S. Office of Education Site Visit of the Cost and Funding Studies Concerning the Proposed Western Interstate Bibliographic Network

Appendix G: Western Network Newsletter, Number 1, January, 1976

Appendix H: Summary of Cost and Funding Studies Issued at Western Network Steering Committee Meeting, February 2-3, 1976, Boise, Idaho

Appendix I: Financial Report

Appendix J: Record of Distribution of Report

APPENDIX A

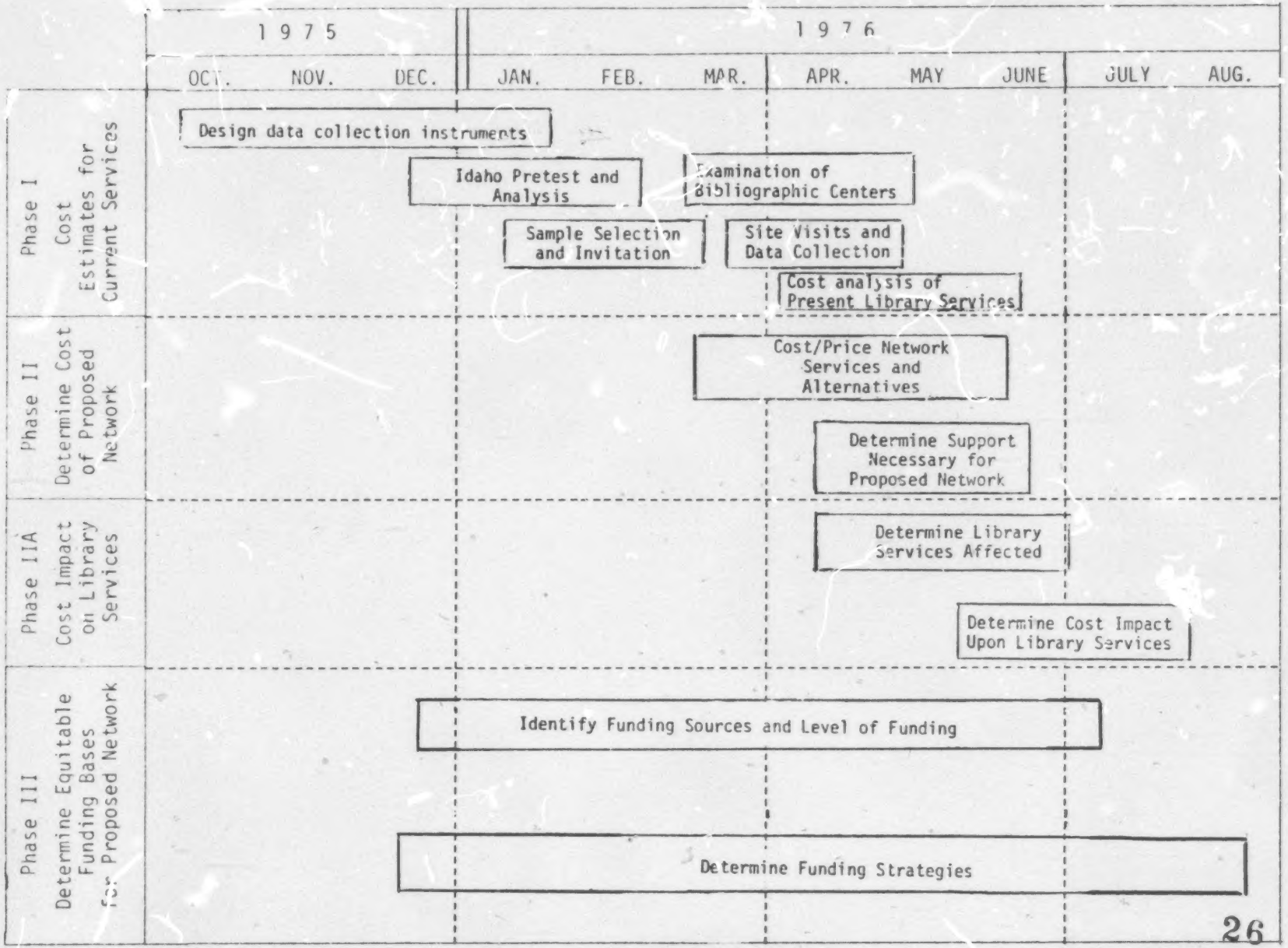
OVERVIEW OF REVISED SCHEDULE

FOR THE COST AND FUNDING STUDIES

OF A WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

COST AND FUNDING STUDIES CONCERNING THE DEVELOPMENT OF A WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

OVERVIEW OF REVISED SCHEDULE



APPENDIX A

APPENDIX B

EFFECT ON PUBLIC LIBRARY UNIVERSE BY THE EXCLUSION OF LIBRARIES WITH LESS THAN 3,000 VOLUME HOLDINGS

APPENDIX B

EFFECT ON PUBLIC LIBRARY UNIVERSE BY THE EXCLUSION OF LIBRARIES WITH LESS THAN 3000 VOLUME HOLDINGS

(Source: State planning data and American Library Directory, 1974-75)

State	Estimated Population size	Estimated number of Libraries with less than 3000 volumes	Estimated Adjusted Population size
Alaska	53	15	38
Arizona	124	57	67
California	185	2	183
Colorado	113	1	112
Hawaii	40	0	40
Idaho	110	12	98
Kansas	273	47	226
Montana	114	5	109
Nebraska	207	10	197
Nevada	19	0	19
New Mexico	39	0	39
North Dakota	41	1	40
Oregon	185	22	163
South Dakota	126	7	119
Utah	61	0	61
Washington	76	4	72
Wyoming	23	0	23
British Columbia	48	0	48

APPENDIX C

CRITERIA FOR LISTING IN THE HIGHER EDUCATION - EDUCATION DIRECTORY, 1974-75

CRITERIA FOR LISTING IN THE "HIGHER EDUCATION - EDUCATION DIRECTORY, 1974-75" USED TO ESTABLISH "OTHER ACADEMIC LIBRARY" UNIVERSE

This directory lists institutions in the United States and its outlying areas (American Samoa, Canal Zone, Guam, Puerto Rico, the Virgin Islands, and the Trust Territory of the Pacific Islands) that meet the following requirements: (1) They are legally authorized to offer and are offering at least a 2-year program of college-level studies in residence or, if nonresident in nature, they are accredited or preaccredited by an accrediting agency recognized for such purpose by the Commissioner of Education, (2) they have submitted the information required for listing, and (3) they meet one of the traditional criteria for listing as institutions of higher education.

The criteria for listing in the directory are as follows:

1. Institutions accredited by a nationally recognized accrediting agency or approved 1/ by a State department of education or by a State university are eligible for inclusion.

2. Institutions that have attained a preaccredited status 1/ with designated nationally recognized accrediting agencies are eligible for inclusion.

3. Institutions not meeting requirements of criterion 1 or 2 are eligible for inclusion if it can be confirmed that their credits have been and are accepted as though coming from an accredited institution by not fewer than three institutions accredited by nationally recognized accrediting agencies.

"College-level studies," as the term is used here, means a postsecondary program which (a) is wholly or principally creditable toward a baccalaureate degree and/or (b) terminates in an associate degree.

1/ This category includes those institutions designated as approved, accredited, recognized, or registered through State programs which include establishment of criteria, evaluation of institutions, publication of a list of institutions that meet the criteria, and periodic reviews for continued approval. It does not include institutions approved for obtaining or amending a charter, for training veterans, or for enrolling war orphans or foreign students.

From Higher Education - Education Directory, 1974-75 by Arthur Podolsky, U.S. Department of Health, Education, and Welfare; Education Division, and National Center for Education Statistics, USGPO, Washington, 1975.

APPENDIX D

SELECTED POTENTIAL CORRELATIONS TO BE PERFORMED ON SURVEY OF COSTS IN TECHNICAL SERVICES AND INTERLIBRARY LOAN

SELECTED POTENTIAL CORRELATIONS TO BE PERFORMED ON SURVEY OF COSTS IN TECHNICAL SERVICES AND INTERLIBRARY LOAN

The following represents the major areas of concentration for correlations in the analysis of survey data to be collected in the 100 Western libraries:

Effects of network participation: The examination of network participation versus non-network participation according to the services offered by the network and impacted areas of cost entails the survey of effects (if any) upon the size of staff, staffing patterns, operating costs, interlibrary loan patterns (if applicalbe), acquisition and cataloging procedures (if applicable).

Effects of support services: The examination of support services purchased or employed as opposed to libraries not obtaining such services according to the services offered and impacted areas of costs includes the isolation of effects (if any) upon the size of staff, staffing patterns, operating costs, interlibrary loan patterns, acquisition and cataloging procedures (if applicable).

Growth factors: The summary investigation into growth patterns in holdings, staff, operating cost, interlibrary loan and acquisition and cataloging thruput.

Efficienty factors: The calculation of average operating cost-per-volume thruput, staff size per volume thruput, and salary cost-per-volume thruput.

Interlibrary loan patterns: Patterns by size and type of library, "circles" of borrowing and lending concentration, use of bibliographic centers and the effect of that use upon interlibrary loan patterns, fill rates, and efficiency factors.

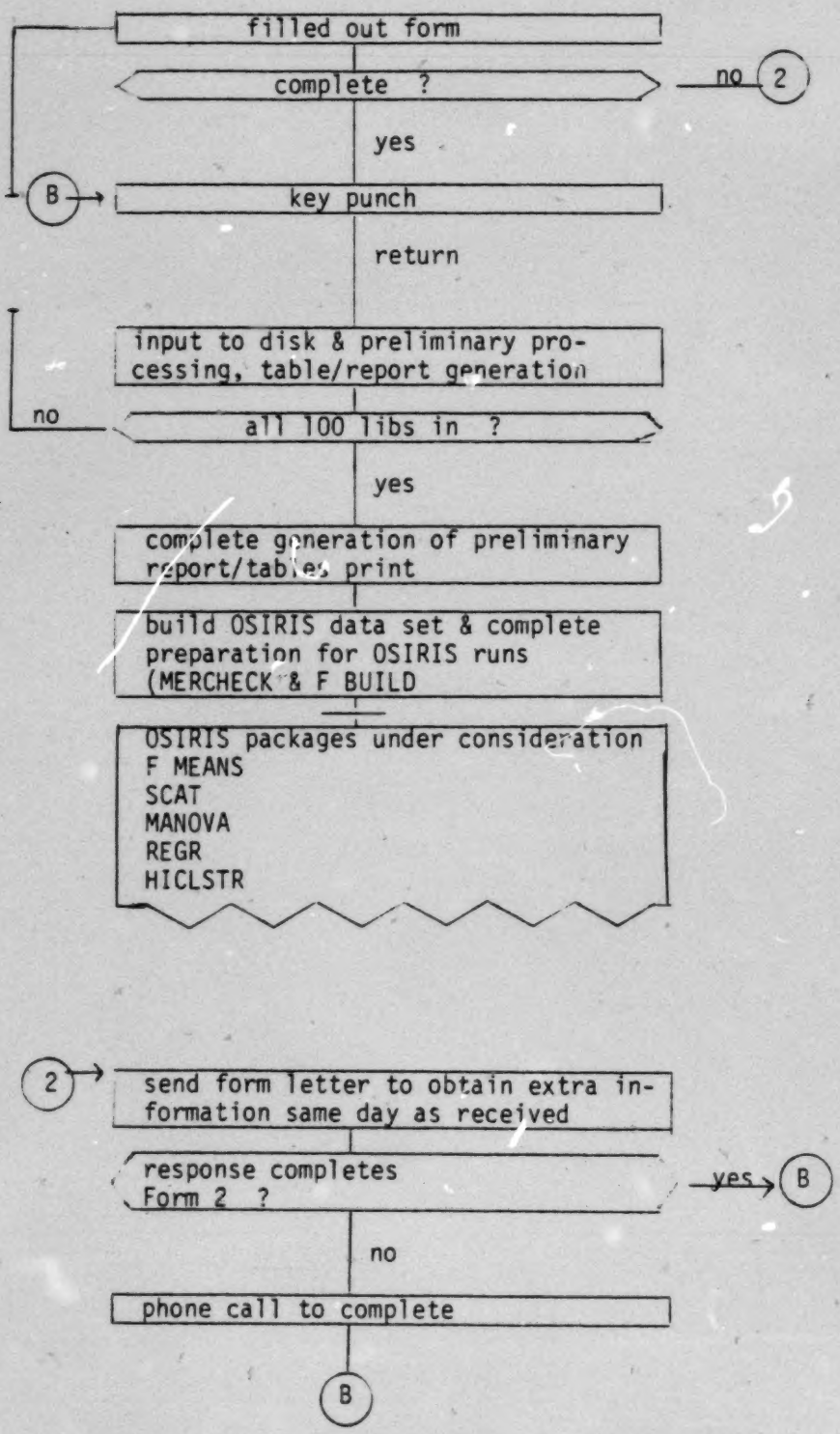
Cataloging patterns: Influence of variable factors (support service, network) on manner of cataloging (percentage of original cataloging, cataloging from LC cards or card copy, cataloging from secondary source, etc.), on lag time (processing time), on backlog, etc. and on efficienty factors.

Acquisitions patterns: Influence of variable factors on manner of acquisition (library selection, approval plans, etc.), on resource sharing, etc. on efficienty factors.

APPENDIX E

FLOWCHART AND STORAGE ALLOCATION FOR SURVEY OF COSTS IN TECHNICAL PROCESSING AND INTERLIBRARY LOAN

FORM 2 GENERAL PROCESSING FLOW DIAGRAM



DISK ALLOCATION

100 Libraries - for each library - deck numbers are for OSIRIS and are logical decks not input cards or card images

Deck	
1	name and structure
2	holdings (3 yrs.) & annual growth
3	personnel: number in each category in each department salary and fringe benefits
4	automation section
5	supplies and services
6	budget section
7	acquisitions section
8	cataloging section
9	regional libraries - services to other libraries section
10	interlibrary loan section - characteristics, etc.

for primary processing - generate preliminary reports as per Idaho Pre-Test

Tables - number of libraries in each strata

2 Holdings: 6 strata x 7 divisions of holdings x 2 (Vols/Titles) * 3 yrs
Volume/title ratio for mongraphs, serials, x 6 strata,

3 Personnel: number of FTE 6 strata x 6 classifications x 6 departments
salaries 6 strata x 6 classifications x 6 departments
fringe benefits
6 strata x 6 departments
each strata, each classification, each department, number of libraries reporting personnel in this blank (for averages)

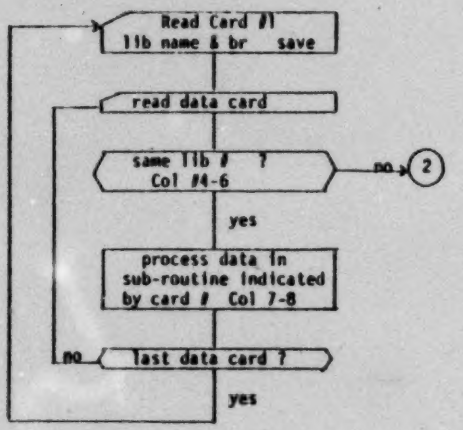
OSIRIS Dictionary, 1 card image for each variable on the disk contains location (deck number & position), type and name n500 variables.

FORM 2 GENERAL DATA - 100 LIBRARIES

Column allocation on input data cards

Column	
1	Form Number
2-3	Page Number
4-6	Library Number (1-100)
7-8	Deck (or card) Number (1-50 for Form 2)
9	Strata Identification Number 1 = Large Academic Library 2 = Other Academic Library 3 = Large Public Library 4 = Other Regional Libraries 5 = Other Public Libraries 6 = State Library
10-80	Data from Form (see form)

CONTROL SECTION



PROCESSING SUBPROGRAM 2

HOLDINGS - Page 2, Form 2

Purpose: • to generate the tables of holdings in volumes and titles for the 100 libraries, by strata,

• to write on the disk, deck 2, holdings information for each library

Entry Points (2) for individual library processing

(3) for generating and printing report

Input (2) card image from calling program, containing

NOF: form number

NOP: page number

NOL: library identification number

NOD: card number 2-7

NOS: strata id # 1-6

Plus: title holdings 1973, >categories

During run, reads 5 more cards, containing title holdings 1974, 1975 and volume holdings 1973, 1974, 1975

(B) none required, in calling, takes (2) generated data from disk,

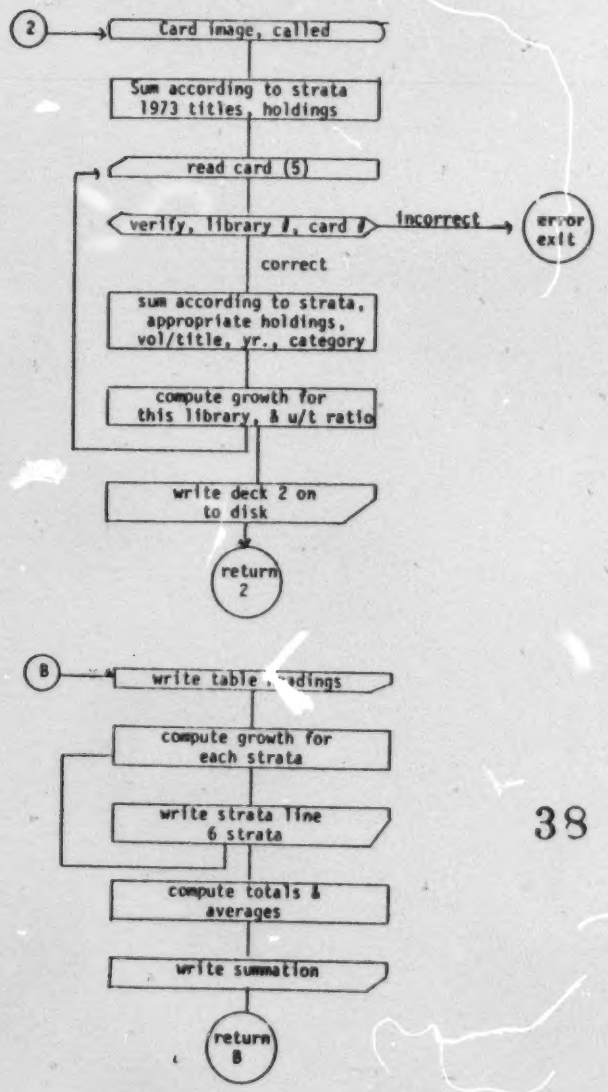
Internal data files: For each strata, for each holdings classification (i.e., monographs, serials, microform serials, microform monographs, technical report/documents and other)

Σ Volume holdings, Σ title holdings, for each year 1973, 1974, 1974

Output (2) to disk, deck #2, volume & title holdings & 1973, 1974, 1975 growth & % growth 1973-4 & 1974-5, vol/title ratio

(B) report-written, volume, title holdings 1975, each category, average growth (% growth) 1973-4,1974-5, vol/title ratio for each strata for each of the 7 holdings categories.

FLOWCHART: PROCESSING SUBPROGRAM 2



APPENDIX F

U.S. OFFICE OF EDUCATION SITE VISIT OF THE COST AND FUNDING STUDIES CONCERNING THE PROPOSED WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

SITE VISIT SCHEDULE

Wednesday, November 12, 1975

7:00 p.m.	Pick up Paul Janaske at airport

Thursday, November 13, 1975

8:45 a.m.	Pick up Paul Janaske at Harvest House
9:00 a.m.	Site visit commences
9:30 a.m.	Dr. Kevin Bunnell, WICHE, Director Division of General Regional Programs
12:00 p.m.	Luncheon at Hungry Farmer Restaurant
2:00 p.m.	GRP Commissioners review of newly-organized programs (WICHE Conference Room)
2:30 p.m.	Staff-Commissioners Conference (Library Programs Offices)
4:00 p.m.	NCHEMS Presentation - Dr. Robert Wallhaus
5:00 p.m.	Adjournment
6:00 p.m.	Social Dinner at Dr. Bunnell's home (1010 Rosehill)

Friday, November 14, 1975

8:30 a.m.	Pick up Paul Janaske at Harvest House
8:45 a.m.	Site Visit continues
10:15 a.m.	Presentation of new proposals to GRP Commissioners (WICHE Conference Room)
12:30 p.m.	Lunch with WICHE Commissioners
2:15 p.m.	Site Visit Adjournment
2:45 p.m.	Paul Janaske to airport
4:25 p.m.	Flight departure time

APPENDIX G

WESTERN NETWORK NEWSLETTER, NUMBER 1

JANUARY, 1976

WESTERN NETWORK NEWSLETTER

January 1976 No. 1 ISSN: 0360-4764

Fifteen months ago, a group of 50 western librarians met in Denver to talk about a western library network. After an arduous year of task force meetings, proposal writing (and rewriting), and some finger-crossing, a project to design and develop an interstate library network (called the Western Network) has gotten underway. The purpose of this Newsletter is to keep interested people informed on the progress of the Western Network project, now being undertaken by the Western Interstate Commission for Higher Education (WICHE).

BACKGROUND

The Western Network project is funded from three sources. The Council on Library Resources (CLR) awarded a $79,325 one-year grant to design, develop and secure sponsorship for a new interstate library network organization serving the western states. The U.S. Office of Education awarded a grant totalling $65,135 to conduct cost and funding studies in support of network design. Both grants began July 1, 1975. Additionally, the WICHE Continuing Education and Library Resources Program Western Council (nine western state library agencies as of 1/1/76), provide $32,744 in support of network design.

Seventeen states in the region are being invited to participate in designing the network (a * indicates members of the Western Council): *Alaska, *Arizona, *California, Colorado, Hawaii, *Idaho, Kansas, *Montana, Nebraska, *Nevada, New Mexico, North Dakota, *Oregon, *South Dakota, Utah, *Washington, and Wyoming; plus the Canadian province of British Columbia.

The Western Network project is currently part of the Continuing Education and Library Resources Program, one of 55 separate programs conducted by WICHE. WICHE, formed by an interstate compact, helps 13 western states work together to increase educational opportunities for Westerners, to improve programs of universities and colleges, to expand the supply of specialized personnel, and to inform the public of higher education needs. The Western Network project has been authorized by the WICHE Commissioners.

PROJECT STAFF

The Western Network Project staff consists of:

Eleanor A. Montague, Project Director
Karl M. Pearson, Jr., Systems Analyst
Maryann Kevin Brown, Cost and Funding Analyst
Anita McHugh, Research Assistant
Louise T. Martin, Project Secretary

WESTERN INTERSTATE COMMISSION FOR HIGHER EDUCATION

The Continuing Education and Library Resources Program staff consists of:

Maryann Duggan, Director
Sue Middleton, Program Secretary
Ann Peckham, Secretary

This Program is part of the General Regional Programs Division of WICHE, headed by Dr. Kevin P. Bunnell.

NETWORK STEERING COMMITTEE

A major milestone for the Western Network project is the first meeting of the Steering Committee to be held in Boise, Idaho on February 2 and 3. This organizing Steering Committee will participate in and advise on planning for a western interstate library network during the CLR grant period. The Steering Committee will have responsibility to review and approve the broad range of network planning and project design recommendations presented by the Western Network project staff and to establish policy and guidance for future development. Major decisions for the Committee will be in the areas of legal, organizational and funding alternatives for the emerging network, as well as implementation strategies to move to a permanent network organization serving the West.

An Executive Board of five members will be nominated from the Steering Committee. The Executive Board will represent the Steering Committee and will work closely with the Western Network project staff on network planning and design.

A summary of the Steering Committee meeting and future Western Network design activities will be included in the next issue of the Western Network Newsletter.

Steering Committee members are:

Norman D. Alexander
Chairman, Library Council
Oregon State System of Higher Education

Kenneth S. Allen
Associate Director of Libraries
University of Washington

Joseph J. Anderson
Nevada State Librarian

H. Vince Anderson, Director
South Dakota State Library Commission

Joanne E. Arnold
Acting Associate Vice-Chancellor for
Faculty & Staff Affairs
University of Colorado - Boulder

James H. Burghardt, Librarian
Library Association of Portland

C. Edwin Dowlin
New Mexico State Librarian

Roger K. Hanson
Director of Libraries
University of Utah

Ernest W. Hartung, President
University of Idaho

K. L. Janecek, Director
North Dakota State University Library

Helen M. Miller
Idaho State Librarian

Edythe Moore, Librarian
Aerospace Corporation
Los Angeles, California

Richard J. Neuman, Librarian
Salina Public Library - Kansas

G. A. Rudolph, Dean of Libraries
University of Nebraska

H. Theodore Ryberg
Director of Libraries
University of Alaska

Basil Stuart-Stubbs
University Librarian
University of British Columbia

Roderick G. Swartz
Washington State Librarian

Eda Taylor
Public Library Trustee - Arizona

Margaret Warden
Montana State Senator

David C. Weber
Director of University Libraries
Stanford University

William H. Williams
Wyoming State Librarian

WESTERN NETWORK GOAL

The goal of the Western Network project is to plan for and develop an interstate bibliographic network to serve libraries of all types in the western states and British Columbia. The aim of the Network is to integrate, strengthen and extend existing services and to move toward new services; the Network will not be competitive with cooperative activities, networks, or systems already at work in the area.

The project is guided formally by the Steering Committee and its Executive Board (described earlier) and the General Regional Programs Division of WICHE; suggestions and assistance from associations, institutions, libraries, and interested people throughout the West are welcomed.

Planning data to support network design is being gathered by the project staff. Under the USOE-sponsored Cost and Funding Project detailed cost studies will be conducted. Throughout the coming months, libraries in 17 states will be invited to participate in studies of technical processing costs, interlibrary loan transactions, and potential network services.

Specifically, the Western Network project can:

1. Plan the organizational, administrative, governance, and legal structure for a permanent network organization representing all types of libraries, and facilitate the transition to a permanent organization and Board of Directors.

2. Provide a mechanism to ensure that the concerns and requirements of the West are represented in national library planning and the development of the national network (see page xi, "Toward a National Program for Library and Information Services: Goals for Action," prepared by NCLIS, 1975). As part of this, the Western Network will work with the Library of Congress (LC) and other interstate networks to share resources, technology, bibliographic data, etc.

3. Provide a vehicle to attract grant funds to support on-going research and development for the benefit of the region. A plan for the technical interconnection of western libraries and systems with LC and other major systems elsewhere in the country is a top priority.

4. Work with states, institutions, and associations in the West to develop interstate interlibrary loan protocols and an equitable funding structure to minimize uncompensated costs incurred by libraries that loan more items than they borrow.

5. Investigate and make recommendations for the development of a regional machine readable bibliographic data base to improve resource sharing and to reduce technical processing costs.

6. Broker automated services from systems like The Ohio College Library Center (OCLC), The Washington Library Network (WLN), and BALLOTS.

7. Identify and obtain network services needed by libraries of all types in the west.

8. Provide efficiencies and economies in training library staffs in utilizing network services effectively.

9. Study, recommend, and develop optimum telecommunication links; work with national organizations to improve telecommunication services and costs for libraries.

10. Develop cost and library processing analysis instruments that can be used by libraries for in-house studies.

11. Perform statewide cost analyses to support network planning.

12. Provide access to expertise and information in the field of library automation and resource sharing.

13. Study, recommend and obtain improved mechanisms for material delivery.

What does this mean to the libraries of the West? Throughout this project, the goal of equitable and cost-effective access to better library service for all types of library users is top priority. Faster access to and delivery of resources, effective use of computer and telcommunication technologies, and sharing of expertise in a coordinated manner will benefit all.

FOR MORE INFORMATION ON THE WESTERN NETWORK

If you would like information on the Western Network project or if you would like to be added to the Newsletter mailing list, please write or call:

Ms. Eleanor Montague, Director
Western Network Project
WICHE
P. O. Drawer "P"
Boulder, Colorado 80302
Phone: (303) 492-8150

WICHE CONTINUING EDUCATION AND LIBRARY RESOURCES PROGRAM

The WICHE Continuing Education and Library Resources Program, of which the Western Network project is a part, has one main goal: to assist in improving library services throughout the West by (1) providing continuing education opportunities for library staff and trustees and (2) stimulating the orderly sharing of and improved access to library resources among all types of libraries in the West. The basic Core program is funded by state library agencies in the West through membership in the Western Council. Special projects (approved by the Western Council and the WICHE Commissioners) are funded by external grants usually matched by Western Council funds. In addition to the Western Network project, the program has on-going continuing education activities. Forty-three librarians from 16 states are currently engaged in a year-long Institute on Library Staff Development. This Institute is funded by a USOE grant ($29,944) plus Western Council funds ($12,000) and support from participating libraries. Ms. Barbara Conroy is Institute Director. A manual of Staff Development Model Programs will be one of the products of this Institute.

Other continuing education activities consist of Workshops (Interpersonal Communication, Basic Reference Services, Management by Objectives, Interlibrary Loan Procedure) and Learning Kits (How to Hire a Librarian, Library Trusteeship, Training of Volunteers, and Government Documents). Special continuing education programs can be designed for any interested group of libraries on request. For additional information on the WICHE Continuing Education and Library Resources Program, contact Maryann Duggan, (303) 492-7317.

WESTERN NETWORK
WICHE Rm 219
P.O. Drawer P
Boulder, Colorado 80302

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APPENDIX H

SUMMARY OF COST AND FUNDING STUDIES

ISSUED AT WESTERN NETWORK STEERING COMMITTEE MEETING

February 2-3, 1976

Boise, Idaho

APPENDIX I

FINANCIAL REPORT

SUMMARY OF BUDGET AND EXPENDITURES FOR OCTOBER 1, 1975 THROUGH DECEMBER 31, 1975

ITEM	ALLOCATION	EXPENDITURES TO DATE	OCTOBER EXPENDITURES	NOVEMBER EXPENDITURES	DECEMBER EXPENDITURES	EXPENDITURES OCT - DEC.	TOTAL EXPENDITURES	BALANCE
01 Salaries-Exempt	$21,495	$634.98	$1,574.16	$1,574.16	$2,223.21	$5,371.53	$6,006.51	$15,488.49
02 Salaries-Non Ex	3,500	- -	77.86	274.05	(274.05)	77.86	77.86	3,422.14
04 Contract Hrly	- -	- -	- -	- -	- -	- -	- -	- -
05 Vacation Ben.	- -	- -	- -	- -	- -	- -	- -	- -
07 Staff Benefits	3,594	- -	320.18	258.75	272.88	851.81	851.81	2,742.19
26 Intern Stipend	- -	- -	- -	- -	- -	- -	- -	- -
27 Consultant Fee	8,000	75.00	750.00	300.00	475.00	1,525.00	1,600.00	6,400.00
28 Subcontracts	6,200	- -	- -	- -	- -	- -	- -	6,200.00
29 Data Processing	500	- -	- -	- -	- -	- -	- -	500.00
30 Travel-Staff	6,017	- -	369.52	71.49	545.20	986.21	986.21	5,030.79
31 Travel-Relocate	- -	- -	- -	- -	- -	- -	- -	- -
32 Travel-Consult	2,850	87.29	- -	213.62	160.50	374.12	461.41	2,388.59
33 Travel-Other	- -	313.88	- -	- -	- -	- -	313.88	(313.88)
34 Travel-Trainee	- -	- -	- -	- -	- -	- -	- -	- -
45 Publications	182	- -	- -	- -	10.52	10.52	10.52	171.48
53 Office Rent	900	89.38	89.38	89.38	89.29	268.05	357.43	542.57
54 Phone Equip	372	- -	95.06	54.38	48.98	198.42	198.42	673.58
55 Phone Toll	822	5.55	6.84	1.57	60.15	68.56	74.11	747.89
58 Postage	300	.30	1.80	13.59	20.23	35.62	35.92	264.08
60 Meeting Exp	- -	- -	48.82	- -	11.25	60.07	60.07	(60.07)
61 Office Supplies	333	- -	62.40	78.50	32.73	173.63	173.63	159.37
64 Copying	400	37.36	10.97	141.77	291.91	444.65	482.01	(82.01)
65 Other Exp	1,328	338.02	64.95	65.34	95.99	226.28	564.30	763.70
66 Train Matrls	- -	- -	- -	- -	- -	- -	- -	- -
77 Equip Purchase	1,300	- -	- -	132.52	- -	132.52	132.52	1,167.48
TOTAL DIRECT COSTS	58,593	1,581.76	3,471.94	3,269.12	4,063.79	10,804.85	12,386.61	46,206.39
99 Indirect Costs	10,803	237.00	588.00	586.00	930.00	2,104.00	2,341.00	8,462.00
GRANT TOTAL	69,396	1,818.76	4,059.94	3,855.12	4,993.79	12,908.85	14,727.61	54,668.39

ATTACHMENT TO FINANCIAL REPORT FOR USEO G OO 7500741, PROJECT NO. 375AH50102

OCTOBER 1, 1975 to December 31, 1975

		Second Quarter
A.	Salaries, Wages, and Employee Benefits	
	Ms. Maryann Duggan, C&F Project Director (10% F.T.E. on project at annual salary of $25,404. Work started on project 7/1/75.) WICHE Line Item 01	$ 635.10
	Maryann K. Brown, C&F Cost Investigator (100% F.T.E. on project at annual salary of $16,350. Work on project began 10/1/75.) WICHE Line Item 01	4,087.38
	Anita McHugh, C&F Research Assistant ($4.62/hr., approximatelv 20 hrs/week. Work on project began 11/10/75.) WICHE Line Item 01.	649.05
	Vicki Osgood, Secretary (50% of half-time (50% F.T.E.) position at annual salary of $4,149. Work period began 10/21/75 and terminated 11/10/75.) WICHE Line Item 02	77.86
	Employee Benefits	851.81
	Total Salaries, Wages & Employee Benefits	$6,301.20

B.	Consultant Fees		
	V.E. Palmour	Planning for C&F Study (7/25,7/26,8/2,9/14-18-19), per contract	$ 750.00
	M.K. Brown	Preliminary work for C&F Study prior to full-time employment; 9/14 - formulation of methodology for inintial data gathering working with V.E. Palmour 9/18-19 - attendance and participation in Initial Planning Meeting for C&F Study, Washington D.C.	375.00
	Eleanor Montague	Consult with staff on CLR Network Design grant and USOE C&R grant, 11/12-13-14-17 - 75% of total paid by CLR grant	100.00
	Ronald Miller	Consult as Evaluator for C&F Study, 9/19-19, Washington, D.C. Initial Planning Meeting for C&F Study	200.00
	Lucille Wert	Review and make recommendation on data collection instruments 11-23	100.00
		Total Consultant Fees	$1,525.00

C. Travel

Inclusive Dates	Person, Destination, City & Institution	Purpose	Transp.	Living	Total
7/24-26	Vernon E. Palmour, Cody, Wyo. to Boulder*	Confer regarding C&F Project	114.23	46.27	$160.50*
9/14-17	Maryann Duggan Boulder to Wash. D. C.	Cost & Funding Planning Session	83.69	89.07	172.76**
9/18-19	Ronald Miller, Boston, Mass. to Wash., D.C.	Cost & Funding Planning Session	139.26	62.30	201.56
9/17-19	Karl Pearson, Boulder-Washington, D.C.	Cost & Funding Planning Session	135.76	61.00	196.76***
9/18-19	Vernon E. Palmour, Vienna, Virginia to Wash., D. C.	Cost & Funding Planning Session	4.20	7.86	12.06
10/2-3	M.K. Brown, Boulder to Davis, San Francisco, Sacramento, Calif.	Attend Automation Conference; Confer with Sheila Thornton, Calif. State Library Union Catalog	37.45	6.13	43.58
10/23-24	Maryann Duggan, Boulder to Salem, Oregon	Attend and participate in "Network Cooperation Conference" sponsored by Oregon State Library	24.97	2.94	27.91****
11/13-14	Maryann Duggan Boulder-Denver	Transportation and expenses related to U.S. Office of Education Site Visit	9.35	33.29	42.64
11/20-25	Maryann K. Brown Boulder to Sacramento, Calif; Reno, Nevada; Boise, Idaho	Confer with Sheila Thornton, Calif. State Library Union Catalog; Rae Cleminson, Nevada State Library re. data collection instruments; meet with Idaho libraries regarding pre-test of instruments	374.23	108.33	482.56
	Charge for renewal of American Express Credit Card				20.00
		TOTAL TRAVEL	$923.14	$417.19	$1,360.33

* Originally charged to Library Resources budget in error.

** Costs equally shared by Library Resources, CLR and C&F grants.

*** Costs equally shared by CLR & C&F

****Costs divided: Library Resources, 65%, CLR, 25%, and C&F, 10%.

APPENDIX J

RECORD OF DISTRIBUTION OF REPORT

USOE Grant: G 00 7500741

N-12/000/00
29 January 1976

SUMMARY OF THE COST AND FUNDING STUDIES BEING CONDUCTED FOR THE DEVELOPMENT AND IMPLEMENTATION OF A WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

Under a grant from the U. S. Office of Education (USOE), the WICHE Continuing Education and Library Resources Program is conducting cost and funding studies to support the development and implementation of a Western Interstate Bibliographic Network. These studies are being performed in conjunction with the network design and development project funded by the Council on Library Resources (CLR) and the Western Council. The USOE grant, for a one year period, was officially awarded July 1, 1975.

The cost and funding studies have four primary goals; each is described in the following section:

I. To determine representative costs of present library services without network support;

II. To estimate future costs of library services at various levels of proposed network support;

III. To evaluate and compare the impact of a network upon costs of library services; and

IV. To examine and recommend equitable programs of financial support for an interstate bibliographic network in the West.

I. DETERMINE REPRESENTATIVE COSTS

For the purposes of the cost study, we are focusing our attention on those library activities that are most likely to be affected by the presence of a regional network. Thus, the study will examine costs in the technical processing, interlibrary loan, and administration areas of library operations.

Cost data will be collected from 100 academic and public libraries in the region. We will use a stratified random sample (outlined in attachment A) recommended by the study's consultant, Vernon E. Palmour, who has designed a number of major library cost studies. The data will be collected by means of a questionnaire survey. Twelve libraries in the sample will be asked to participate in a more extensive data collection effort to obtain detailed costs for the various subtasks involved in each major operational activity.

The surveys will collect basic data on collection size, volume of activity ("throughput") in technical processing and interlibrary loan, and

budget allocations. Detailed data will be collected on the following cost elements in technical processing and interlibrary loan, and budget allocations.

a. Direct Labor. Data to be collected include number and level of staff (expressed in FTE), salaries, and fringe benefits. Because network products and services might occasion a change in the mix of staff assigned to various activities, staffing data will be broken down into the levels of professional, paraprofessional, clerical, and student assistant. In addition, technical processing will be subdivided into activity categories related to acquisitions, cataloging, serials, bindings, etc.

b. Administrative and Supervisory Labor. This cost element includes the planning, budgeting, controlling activities required for the management of the library as a whole, as well as the direct supervision of technical processing and interlibrary loan by departmental supervisors (where appropriate). The presence of a network may affect the amount and kind of "administrative and supervisory overhead" required for these activities, both directly because of changes in the staffing mix and indirectly because of effort applied to relating the library as a whole to the network mode of operation.

c. Support Services. This cost element includes resources allocated to procuring services and products that increase staff productivity or that improve efficiency or effectiveness. Support services may be purchased from out-of-library suppliers or may be obtained through operation of an in-library automated system. The sample of libraries surveyed is likely to include some that already use some of the products and services that a network might provide, and thus it is important in analyzing the collected data to be able to determine the degree to which a respondent is already operating in a network mode.

d. Telecommunications. This element includes costs for telephone, TWX, telex, facsimile, and similar telecommunications services used

by a library for message transmission, data transmission, and interaction with other libraries, vendors, data base systems, and so on, in connection with technical processing and interlibrary loan. A network is likely to foster increased use of telecommunications for interlibrary communication and for access to computer-based bibliographic services.

e. Equipment. Equipment costs must be segregated according to the likely effect of network operations on them. We see three categories of equipment cost. The first category consists of equipment costs that are directly related to production, such as files, duplicating machines, teletype terminals, etc. The second category consists of equipment costs directly related to staff size, such as furniture and typewriters. The third category contains costs for equipment that is related to the operation of the library as a whole or is not related to production or staffing, and is unlikely to be affected by any networking activity.

f. Supplies. This cost element includes the stock of items (other than equipment) used to maintain normal operations, support routines, etc. (e.g., paper supplies, card stock, forms, pencils, pens, etc.). Supplies, like equipment, must be categorized according to the likely effect of network operations. There is a supply cost directly related to the size of staff that will fluctuate according to the impact of a network on staff size. Certain other supplies are related to production. There is also a core supply expense which will remain unaffected by network support.

Further refinement of these broad cost elements will be achieved through the detailed case studies of twelve libraries subjectively selected from the sample of 100 libraries. Within these case studies, additional cost elements will be required to delineate "real" costs:

g. Facility overhead. This includes building investment, depreciation, rental, maintenance, utilities and space allocation to those task areas being studied.

h. Equipment overhead. This includes an accounting of the costs for

equipment owned, date of purchase, depreciation, and allocation to those task areas being studied.

i. Detailed administrative overhead. This includes a rigorous examination of the administrative structure and cost of activities directly related to technical processing and interlibrary loan.

In the twelve case studies, individual subtask activities will be surveyed for a period of three weeks to capture unit time and processing cost data. This study will provide a detailed accounting of staff time, by level of staff, and the corresponding direct costs, for specific subtasks within technical processing and interlibrary loan. Having these data in hand, it will be possible to evaluate the cost impact of network activities, products and services that alter or replace current subtasks.

The data collection instruments developed for this cost study will be available for the use of any library wishing to use them as tools in their own evaluation of internal operations.

In addition to the cost data collected from libraries, the study will also collect data from three major bibliographic centers in the west: the Bibliographic Center for Research in Denver; the Pacific Northwest Bibliographic Center in Seattle; and the California State Library Union Catalog. This portion of the study will focus on the costs associated with maintaining the union catalogs at the centers and with providing location and interlibrary loan services to member libraries. Data on the characteristics and patterns of interlibrary loan and location transactions will also be collected.

II. ESTIMATE FUTURE COSTS

Estimating future costs requires the examination of costs at two levels -- the network level and the individual library level. Services defined and specified for the Western Network will be used as the base for predicting network costs. This analysis may require use of a complex predictive model with several iterations contingent on alternative network designs, varying levels of expected participation, and the array of network services offered. Because network services are likely to be based on available automated services, such as BALLOTS, the Washington Library Network, and the Ohio College Library Center, costs to member of the network

will reflect the corresponding pricing structures. Both the initial investment costs and the operating costs as incurred by the individual library are to be examined. Initial investment costs to be explored include:

* development and design of the system components (if required);
* profiling and programming the requirements of network members;
* conversion of manual files of network members to system files;
* equipment and equipment installation;
* communication links; and
* training of member library personnel in system use.

Operating costs are defined to be those costs incurred for the normal operations of the system and system use. These costs include:

* data base building, updating, storage, and maintenance;
* product and service charges, membership fees, etc.
* equipment rental and maintenance;
* updating network member profiles and programs;
* supplies;
* telecommunications;
* network support and consulting;
* system maintenance.

From this compilation anticipated costs to an individual library for network services can be predicted. Additionally, network operating costs as a function of service volume and options can be estimated. Thus, the total funding requirements necessary to support the network can be predicted.

III. EVALUATE NETWORK IMPACT ON COSTS

After ascertaining present library costs in technical processing and interlibrary loan without network support, and expected future costs with a network (Phases I and II), these costs will be compared (Phase III). The library cost data for current activity as collected and analyzed during the first phase of this project represents the base from which extrapolations will be made. Identification of activities (and their corresponding costs) affected by network support (along with the manner in which they will be affected) allows for the estimation of cost changes introduced by replacement or adaptation of these activities by network services. Network costs and "new" activity costs will be substituted for replaced activity costs, and thus, a predictive model of the cost impact of network participation upon an individual library can be formulated. To insure the viability of such a predictor, the model will account for varying levels of network partici-

pation and service. Results of similar studies concerning the introduction of support systems to library technical processing and interlibrary loan will be employed to refine and validate these cost-impact estimates.

IV. RECOMMEND FUNDING STRATEGY

The most significant objective of these studies is to determine a funding strategy for a proposed network. Initial investigation into funding will include examination of existing network funding strategies, as well as public policy and legal issues as they affect funding. After formulating a wide spectrum of alternatives, and defining possible membership groups, funding strategies will be analyzed in light of the results of the cost studies, particularly the estimate of network funding requirements developed in phase II. Additionally, the types of network membership (e.g., state, multi-county, individual library, etc.) options and scaling of membership fees will be considered. Further the network cost impact developed in Phase III will be considered in determining the desirability of a membership fee graduated according to type and size of library and in relation to the cost-savings or cost-benefits associated with network services to each group. In this manner, equitable membership fees can be calculated. Such an approach to funding will yield a set of optimal strategies upon which viable and equitable funding decisions can be made.

The scope and depth of these studies suggest they may be potential contributions to methodology, modeling and evaluation of library costs. Indeed, beyond the specific purpose these studies serve in the development of the Western Network, these studies will be of substantial value to future research in library services.

The progress of these studies will be reported in the Western Network Newsletter. Additionally, further detail on the study can be found in the quarterly reports for this project, released in October, 1975 and February and April, 1976. The final report will be available in September, 1976. For further information regarding these cost and funding studies, please contact:

Maryann K. Brown,
Cost and Funding Investigator
WICHE, P. O. Drawer P
Boulder, Colorado 80302
(303) 492-8188

ATTACHMENT A

OUTLINE OF THE SAMPLE DESIGN TO BE USED IN THE SURVEY FOR THE COST AND FUNDING STUDIES OF THE PROPOSED WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

The sample proposed for the survey of present library costs in 100 libraries in the 17 western states and British Columbia includes academic, public and state libraries. Considerable study was given to the possible inclusion of special libraries and school libraries. These libraries represent an essential resource in any western network and, clearly, must be included in network planning. However, an adequate examination into the technical processes and interlibrary loan services of these groups requires an entirely different type of study approach to account for the varying procedures, purposes and requirements of these libraries. This unique study does not fall under the charge of this grant, but should be given consideration for future study.

The sample was designed to allow the collection of a great amount of data concerning costs and interlibrary loan traffic via a survey instrument. Larger libraries, both academic and public, represent a major portion of those costs as well as interlibrary loan transactions to which this study is directed. Consequently the sample is weighted towards the inclusion of the larger institutions. Additionally, regional systems were singled out as a valuable source of interlibrary loan data. For these reasons the strata follow these guidelines:

Academic Library: A library which serves a four-year university or college or a two-year junior college or community college which meets the criteria for listing in the Higher Education Directory 1974-75; exluding, however, institutions which are for-profit, trade schools, exclusively graduate education, or highly specialized institutions such as seminaries, industrial schools, etc.

Large Academic Library: Institutions meeting the criteria indicated under academic and whose holdings exceed 920,000 volumes.

Other Academic Library: Institutions meeting the criteria indicated under academic and whose holdings do not exceed 920,000 volumes.

Public Library: A library that serves free all residents of a community, district or region, and receives its financial support, in whole or in part, from public funds.

ATTACHMENT A (cont.)

Large Public Library: A public library, according to the above classification, which is among the larges ten libraries in the western 17 states and British Columbia. This is contingent upon willingness to participate in the survey.

Other Regional Headquarters: A public library serving, or housing a center which serves, a group of communities, or several counties, and supported in whole or in part by public funds from the governmental units served; excluding those which are considered a part of the "large public" stratum.

Other Public Library: A public library which does not fall under the definition of a large public or regional headquarters library.

State Library: A library maintained by state funds for the use of state officials, and sometimes for the use of all citizens of the state.

The following table displays the number of libraries within each stratum to be included in the survey and in the case studies.

Stratum	Number in sample	Number of Case Studies (also part of sample)
Academic Libraries		
Large	19	2
Other	26	3
Total	45	5
Public Libraries (38)		
Large	10	2
Other Regional Headquarters	18	2
Other	10	1
Total	38	5
State Libraries	17	2
Sample Total:	100	Case Study Total: 12

USOE Grant: G 00 7500741

N-12/000/00
29 January 1976

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Further refinement of these broad cost elements will be achieved through the detailed case studies of twelve libraries subjectively selected from the sample of 100 libraries. Within these case studies, additional cost elements will be required to delineate "real" costs:

g. Facility overhead. This includes building investment, depreciation, rental, maintenance, utilities and space allocation to those task areas being studied.

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will reflect the corresponding pricing structures. Both the initial investment costs and the operating costs as incurred by the individual library are to be examined. Initial investment costs to be explored include:

* development and design of the system components (if required);
* profiling and programming the requirements of network members;
* conversion of manual files of network members to system files;
* equipment and equipment installation;
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* training of member library personnel in system use.

Operating costs are defined to be those costs incurred for the normal operations of the system and system use. These costs include:

* data base building, updating, storage, and maintenance;
* product and service charges, membership fees, etc.
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* system maintenance.

From this compilation anticipated costs to an individual library for network services can be predicted. Additionally, network operating costs as a function of service volume and options can be estimated. Thus, the total funding requirements necessary to support the network can be predicted.

III. EVALUATE NETWORK IMPACT ON COSTS

After ascertaining present library costs in technical processing and interlibrary loan without network support, and expected future costs with a network (Phases I and II), these costs will be compared (Phase III). The library cost data for current activity as collected and analyzed during the first phase of this project represents the base from which extrapolations will be made. Identification of activities (and their corresponding costs) affected by network support (along with the manner in which they will be affected) allows for the estimation of cost changes introduced by replacement or adaptation of these activities by network services. Network costs and "new" activity costs will be substituted for replaced activity costs, and thus, a predictive model of the cost impact of network participation upon an individual library can be formulated. To insure the viability of such a predictor, the model will account for varying levels of network partici-

pation and service. Results of similar studies concerning the introduction of support systems to library technical processing and interlibrary loan will be employed to refine and validate these cost-impact estimates.

IV. RECOMMEND FUNDING STRATEGY

The most significant objective of these studies is to determine a funding strategy for a proposed network. Initial investigation into funding will include examination of existing network funding strategies, as well as public policy and legal issues as they affect funding. After formulating a wide spectrum of alternatives, and defining possible membership groups, funding strategies will be analyzed in light of the results of the cost studies, particularly the estimate of network funding requirements developed in phase II. Additionally, the types of network membership (e.g., state, multi-county, individual library, etc.) options and scaling of membership fees will be considered. Further the network cost impact developed in Phase III will be considered in determining the desirability of a membership fee graduated according to type and size of library and in relation to the cost-savings or cost-benefits associated with network services to each group. In this manner, equitable membership fees can be calculated. Such an approach to funding will yield a set of optimal strategies upon which viable and equitable funding decisions can be made.

The scope and depth of these studies suggest they may be potential contributions to methodology, modeling and evaluation of library costs. Indeed, beyond the specific purpose these studies serve in the development of the Western Network, these studies will be of substantial value to future research in library services.

The progress of these studies will be reported in the Western Network Newsletter. Additionally, further detail on the study can be found in the quarterly reports for this project, released in October, 1975 and February and April, 1976. The final report will be available in September, 1976. For further information regarding these cost and funding studies, please contact:

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ATTACHMENT A

OUTLINE OF THE SAMPLE DESIGN TO BE USED IN THE SURVEY FOR THE COST AND FUNDING STUDIES OF THE PROPOSED WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

The sample proposed for the survey of present library costs in 100 libraries in the 17 western states and British Columbia includes academic, public and state libraries. Considerable study was given to the possible inclusion of special libraries and school libraries. These libraries represent an essential resource in any western network and, clearly, must be included in network planning. However, an adequate examination into the technical processes and interlibrary loan services of these groups requires an entirely different type of study approach to account for the varying procedures, purposes and requirements of these libraries. This unique study does not fall under the charge of this grant, but should be given consideration for future study.

The sample was designed to allow the collection of a great amount of data concerning costs and interlibrary loan traffic via a survey instrument. Larger libraries, both academic and public, represent a major portion of those costs as well as interlibrary loan transactions to which this study is directed. Consequently the sample is weighted towards the inclusion of the larger institutions. Additionally, regional systems were singled out as a valuable source of interlibrary loan data. For these reasons the strata follow these guidelines:

Academic Library: A library which serves a four-year university or college or a two-year junior college or community college which meets the criteria for listing in the Higher Education Directory 1974-75; exluding, however, institutions which are for-profit, trade schools, exclusively graduate education, or highly specialized institutions such as seminaries, industrial schools, etc.

Large Academic Library: Institutions meeting the criteria indicated under academic and whose holdings exceed 920,000 volumes.

Other Academic Library: Institutions meeting the criteria indicated under academic and whose holdings do not exceed 920,000 volumes.

Public Library: A library that serves free all residents of a community, district or region, and receives its financial support, in whole or in part, from public funds.

ATTACHMENT A (cont.)

Large Public Library: A public library, according to the above classification, which is among the larges ten libraries in the western 17 states and British Columbia. This is contingent upon willingness to participate in the survey.

Other Regional Headquarters: A public library serving, or housing a center which serves, a group of communities, or several counties, and supported in whole or in part by public funds from the governmental units served; excluding those which are considered a part of the "large public" stratum.

Other Public Library: A public library which does not fall under the definition of a large public or regional headquarters library.

State Library: A library maintained by state funds for the use of state officials, and sometimes for the use of all citizens of the state.

The following table displays the number of libraries within each stratum to be included in the survey and in the case studies.

Stratum	Number in sample	Number of Case Studies (also part of sample)
Academic Libraries		
Large	19	2
Other	26	3
Total	45	5
Public Libraries (38)		
Large	10	2
Other Regional Headquarters	18	2
Other	10	1
Total	38	5
State Libraries	17	2
Sample Total:	100	Case Study Total: 12

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